

Scientific Club

of WINNIPEG



"The FIRST FORTY YEARS--1905-1945"

An Address Delivered on October 9, 1945

by

F. D. White



With

List of Former and Present Members and Guests

and of

Their Communications to the Club

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THE FIRST FORTY YEARS, 1905 - 1945

by
F. D. White

In this month of October, forty years ago, the following circular letter was drafted and sent to certain selected individuals:

University of Manitoba,
Winnipeg, Canada,
17th October, 1905.

THE SCIENTIFIC CLUB

Dear Sir:

It has occurred to the undersigned that it would be desirable to start a small, private, Scientific Club, which would meet at regular intervals to be determined upon later. The meetings would be of an informal and social character, and might take place in turn in the private rooms at the University or at the houses of members.

The main object of the Club would be to discuss new and current scientific questions, and it is hoped that such discussion would act as a stimulus to original research on the part of members. It is proposed that for the present, membership be restricted to about ten or twelve persons.

A preliminary meeting of the Club will be held in Professor Vincent's private room at the University, on Tuesday evening next, October 24th, at 8.30 o'clock. We have much pleasure in inviting you to become a member.

Yours truly,

(Signed) A. H. Reginald Buller,
Matthew A. Parker
Swale Vincent

As a result of this letter, a meeting was duly held upon the date chosen, the minutes of which read as follows:

Meeting of the Club held at the University,
Tuesday, October 24, 1905

Present: Messrs. Parker (in the chair), Allen, Bell, Buller, Cochrane, Smith, Torrance, Vincent.

- Resolved: 1. That the name of the club be "The Scientific Club."
2. That the chairman for the evening be the reader of the paper at the previous meeting, or in his absence the reader of the paper at the meeting preceding the last.
3. That Swale Vincent be Secretary-Treasurer of the Club.
4. That the place of meeting be usually the University, but that if the reader of the paper on any particular evening desire to have the meeting elsewhere, the Club may accede to his request.

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5. That the meetings be held fortnightly, on Tuesday evenings, and that the first meeting for scientific business be on Tuesday, November 7th.
6. That the hour of the meetings be 8.15 for 8.30 p.m.
7. That new members be elected by ballot, and that two black balls exclude.
8. That notice of proposal for new members be made at one meeting, election to take place at the following meeting.
9. That members be allowed to introduce visitors.

There was no scientific business.

(Signed) Matthew A. Parker
7.XI.05

Thus was inaugurated the Club of which we have the privilege of being members, and now, forty years later, it is of interest to trace its growth, discuss its progress, and consider its present position in regard to the purpose for which it was founded.

As originally constituted, the Club consisted of a few members interested, and for the most part actively engaged, in research, who met at fortnightly intervals to discuss the problems which engaged their attention and to record the progress made towards their solution. So great was the enthusiasm of these men that, influenced by their example, the circle of those interested expanded, and every year showed an increase in the number of applications for membership. From the outset it had been decided that there should be a limited membership, and on December 3rd, 1907, this was set tentatively at 40, a figure which was confirmed at a meeting on March 2nd, 1909. At this same meeting the Attendance Rule was adopted. This rule empowered the Committee to remove from the membership roll any member who had been absent from five consecutive meetings without furnishing a written explanation satisfactory to the Committee. This rule, the subject of much adverse criticism, then and subsequently, was instituted with the idea of furthering the initial purpose of the Club, the encouragement of research. It was felt that this objective was more likely to be attained if the membership was limited to a relatively small number genuinely interested in the advancement of scientific knowledge in all its aspects, rather than a larger membership composed in part of those whose attendance depended upon the paper presented being of particular interest to them.

That there was justification for this attitude is shown by the steady growth of the Club. In 1912 the waiting list had attained such proportions that the membership was increased to 45; in 1914 it was raised to 50; in 1916 to 60; and in 1920 to 75. Finally, on February 2nd, 1926, the Committee recommended that the membership be increased to 100. This evoked a considerable amount of discussion, many members objecting on the grounds that an increase such as was contemplated would make the Club unwieldy and tend to destroy the essential club-like atmosphere. On the other hand it was contended that the Club could not stand still and some provision had to be made for its steady and continuous growth. Finally a special Committee was formed to consider the various motions and amendments and advise the Club accordingly. On March 23rd, 1926, this Committee reported to the Club, and the members adopted the recommendation, that rather than set a definite figure for membership, this be controlled by the election of not more than three new members in any one year, irrespective of fluctuations due to resignations, etc. Subsequently, in 1930, this was amended to permit the election of four new members annually, and such is the position at the present time.

In the initial draft of rules only one type of membership was envisaged, but in the second draft, adopted on December 3rd, 1907, provision was made for scientific men not resident in Winnipeg to be admitted as Honorary Members. No elections under this rule were made until October 29th, 1929, when to mark the 25th anniversary of the founding of the Club, Dr. J. S. Plaskett, F.R.S., Director of the Dominion Astrophysical Observatory, Victoria, B. C., and Dr. F. d'Herelle, Professor of Bacteriology, Yale University, were elected honorary members. At the same time an additional clause was inserted in the rules to allow for the conferring of Life Membership on such members as had displayed long-continued activity in the interests of the Club -- such life members to have all the privileges of ordinary members but be exempt from annual dues, and not subject to the operation of the attendance rule. The three Original Members still resident in Winnipeg, Professors Allen, Buller, and Parker, were then unanimously elected life members.

Previously, Corresponding Membership had been instituted at the Annual General Meeting of April 5th, 1911, by the adoption of the following motion, "A former member of the Club, no longer resident in Winnipeg, may, on the recommendation of the Committee, be elected to Corresponding Membership." Professor Ira A. Mackay and Dr. C. H. Vrooman were the first members to be so elected. The session of 1910-11 was also noteworthy in that for the first time the constitution and rules, as amended on April 12th, 1910, were circulated in printed form. This also marked a change in the wording of Rule 1: previously it had read "This Club shall be called the Scientific Club"; the words "of Winnipeg" were now added, the name by which the Club has been known ever since.

There were eight Original Members present at the first meeting of the Club. In the forty years which have elapsed, 223 have been elected, giving a total membership of 231. Of these, 24 have been elected corresponding members, and 14 have been elected life members. Contributions to the proceedings have been made by 167, or 72 per cent. The present membership is 94, consisting of 12 life members and 82 ordinary members; of these 80 (85 per cent) have contributed to the proceedings.

One of the features which has made this Club unique is the absence of presidents and vice-presidents from the list of office bearers. The principle laid down at the first meeting of the Club, that the Chairman for the evening should be the member presenting the paper at the previous meeting, has been followed to this day. Another rule limits the proportion of members possessing medical qualifications to 50 per cent. This was deemed necessary as at one time the Club looked like developing into a medical society, a striking tribute to the personality and prominence in medical research of the then Secretary, Professor Swale Vincent. At the present time the membership roll contains the names of 30 men possessing medical qualifications, a figure well below the limiting 50 per cent. As was to be expected, a considerable number of the papers presented before the Club had a medical bearing, but that this was not out of proportion, and that the Club has lived up to its name, is evident upon investigation. Using a very broad classification, of the 691 communications which make up the scientific proceedings during the past 40 years, approximately 30 per cent were devoted to some branch of medical science, 25 per cent to physics and chemistry, another 25 per cent to biology generally, and 15 per cent to geology and engineering. The remaining 5 per cent were of miscellaneous origin and difficult to classify. At this point it is relevant to mention that the only record of the Proceedings of the Club, apart from the Minute books, is the accompanying list of the titles of all communications, arranged under the names of the authors.

Even although the list contains only the bare titles, and the communications themselves are lost to us, it can still tell an interesting story of the members of this Club, past and present, their interests, and their

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hobbies throughout the years. Professor Swale Vincent's interest in what we now call endocrinology is shown by his contributions to the first session of the Club, one paper on the suprarenal capsules, and another on the islets of Langerhans; succeeding years are sprinkled with his communications on the adrenal cortex and medulla, the thyroid, parathyroids, pituitary, etc. His other great interest is indicated by a couple of papers on music. Professor Buller in the session 1906-07 discussed "The liberation and distribution of fungus spores", and in 1919-20 announced the discovery of "A remarkable fungus gun." Who amongst us who was fortunate enough to be present six years later, will forget his dramatic account of "Fungus guns and their modes of action"? Professor Allen gave his first paper on colour vision in the 1909-10 session, and kept steadily to visual matters until 1924-25 when he branched out with a paper on "The gustatory sensory reflex," followed later by "Salivary reflex" and the "Facilitation and inhibition of muscular action", for the latter paper Dr. O'Donoghue obligingly acting as the guinea pig. So, as we glance through the titles we get hints of the unfolding stories. One can trace Dr. J. C. B. Grant's increasing interest in anthropometry, and observe the development of Professor Cameron's researches on the thyroid from his account in 1913-14 of the "Distribution of iodine in plants and animals." Some of you too will recall Professor Dorsey's paper in 1916-17 on "A new lock-out system for party lines", and his account in 1921-22 of "Low temperature operation of automobile engines." Again, memory awakens when under the name of Dr. Fred Young and the year 1930-31, one glimpses the title, "Eoornis Pterovelox Gobiensis", and remembers with relish his scholarly discourse on the physiology and biochemistry of that remarkable if mythical bird.

The following titles, taken at random, illustrate the wide variety of topics discussed by the Club:

Some physical features of the moon. C. E. Bastin, 1914-15.
Thermo-dynamics of the earth's interior. J. S. DeLury, 1936-37.
Weather forecasting. D. C. Archibald, 1939-40.
Ojibway folklore. W. F. Dey, 1926-27.
Some medical points from Ancient Egypt. A. Gibson, 1923-24.
A dressing station on the Somme. W. Webster, 1919-20.
Primitive man in China. G. I. Boyd, 1931-32.
Flight: why an aeroplane is built that way. J. T. Dymont, 1940-41.
Pelvic architecture. R. B. Mitchell, 1939-40.
Fossil forests. E. W. Montgomery, 1931-32.
Clocks, ancient and modern. H. R. Kingston, 1916-17.
Various phases of Antarctic exploration. Capt. A. Innes-Kerr (guest), 1937-38.
Finger prints. E. J. Evatt, 1910-11.
The use of coral in Japanese ornaments. C. H. O'Donoghue, 1920-21.
The Mexican jumping bean. A. H. R. Buller, 1929-30.
Exhibit of synthetic essences used for illegal beverages. A. Blackie, 1921-22.
The response of fish to noise. V. H. K. Moorhouse, 1931-32.
The dance of the Prairie Chicken. J. K. Morrow, 1932-33.
Method of Indian burial in Vancouver Island. A. T. Cameron, 1913-14.
The science of modern sewage treatment. W. D. Hurst, 1940-41.

As a considerable proportion of these communications embodied the results of original work, the question of publication naturally arose, and on October 31st, 1911, Professor R. C. Wallace moved, "That the Scientific Club take steps to inaugurate a periodical to embody results of original investigations and other material of scientific value communicated to the Club." After considerable discussion, the motion was put to the ballot and was defeated. On April 6th, 1915, Professor Vincent, in reviewing the work of the Club during its first ten years, deplored this, asserting that if appropriate action had been taken then, the proceedings ought by this time to

have ranked as a creditable scientific journal. He expressed the hope that the matter would be raised again, and that the Club would realize the expediency of issuing reports of original communications. As far as the writer can gather, however, this aspiration was not realized. It is true that for some time short notices of the proceedings were sent to the public press, but this practice proving unsatisfactory, it was abandoned.

You will remember that the objective of the Club, as originally defined, was to stimulate original research on the part of the members. As time went on this objective was widened, by implication, to the encouragement of all forms of scientific investigation carried out in the University, from whose staff the Club drew the larger proportion of its members. At first the encouragement consisted mainly in inviting young men and women, working for an advanced degree, to address the Club upon their work and the results they had obtained, but in April, 1920, the Club decided to show its interest in a more tangible form. A prize of \$300.00, to be awarded at Convocation in May, 1922, was offered for the best piece of research work in science (pure or applied) carried out by an undergraduate, or graduate of the University whose date of graduation was subsequent to 1918. At the same time the Committee was instructed to write to the Governor of the Hudson's Bay Company suggesting that, as a commemoration of the 250th anniversary of the founding of that Company, the Company establish two fellowships to be awarded annually for ten years, and tenable at the University of Manitoba -- the recipients of such awards to bear the title of Hudson's Bay Company Research Fellows. The Company accepted this suggestion in part, and agreed to donate the sum of \$15,000.00, sufficient for ten fellowships of \$1,500.00 each, spread over the ten year period. The Club was empowered to draft the regulations and be represented upon the Selection Committee. This was a notable achievement and not only led to some very interesting and productive work in the University, most of which was reported to the Club, but provided ten promising students with a stepping stone for further advancement. Unfortunately, at the end of the ten year period, the Company could not see its way to renew the endowment, and the Fellowships lapsed.

The Club Prize was a single award, but it occasioned so much interest and the quality of the work submitted was of such a high calibre, that a similar award was made at three-yearly intervals until 1931, when it was decided that the purpose of the Club would be better served if the prize were offered every two years, although this involved the reduction of the amount to \$150.00. Two awards were made under this revised ruling, after which there was an inexplicable but significant decline both in the number of applicants and the quality of the work submitted, and no awards were made for ten years. Happily, a worthy recipient was found this year in the person of Miss Boyd, at present studying for the degree of Ph.D. at McGill University. Altogether ten students have received the Club Prize in whole or in part. These are:

- 1922 J. R. McHaffie
Miss Irene Mounce (Joint)
- 1925 Miss Mollie Weinberg
- 1928 L. B. Clark
C. F. Goodeve (Joint)
- 1931 P. A. Macdonald
- 1933 H. D. Carter
C. K. Gunn (Joint)
- 1935 J. A. McLeod
- 1945 Miss Mary L. Boyd

You will note that two of the prize winners, Drs. P. A. Macdonald and J. A. McLeod, are now members of the Club, whilst the name of another, Dr. C. F. Goodeve, will be familiar to all of you for his valuable work with the Royal Navy. Notes on the subsequent careers of these prize winners are appended.

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You will also note that the prize has been by no means a monopoly of the male sex. This is worth stressing as is the fact that women students have from time to time taken part in the proceedings; for there is a widespread belief that the Club does not recognize female scientists. Originally there was nothing in the Constitution and Rules prohibiting the election of women scientists to membership, although there is no record of one applying. Even in the last printing, as at October 1st, 1944, there is no direct prohibition, although By-law 3 makes it rather difficult. The first recorded instance of sex discrimination appears in the minutes of the Annual Business Meeting of April 12th, 1921, when the following motion was adopted, "That it be an instruction to the Secretary to arrange one meeting in each session, at which, while the papers be of the usual high standard of those presented to the Club, subjects and demonstrations of general interest be selected, and ladies as well as other guests, be invited by members to be present, but that at the other meetings of the session ladies be not introduced as guests except in special cases, as when they are contributing papers and then only with the approval of the Committee." This was later incorporated into the Constitution as By-law 3, under the heading "Annual Guest Night." This annual guest night, at first very successful, but later showing a progressive decline in popularity, was abandoned as an annual event at the Annual General Meeting of April 16th, 1935, and By-law 3 amended to read as follows, "Admission of Guests -- Men may be introduced as guests by any member to any scientific session of the Club. The Committee may, when it deems it advisable, arrange special meetings to which women may be invited. Women may also be invited, whenever the author or co-author of a paper on the programme is a woman. With these exceptions, women may not be present at scientific sessions of the Club."

In the light of the prominent part women have taken in the affairs of this and other nations during the war years just concluded, a recasting of the wording of By-law 3 is indicated.

During the past forty years, two Great Wars have convulsed the world and their effect upon the Club has not been negligible. We have been fortunate in losing only one member through enemy action; Milton F. Sproule was killed in France in 1917. Nevertheless, the scientific activities of many others were lost to the Club during those two tragic periods. Paradoxically, although a larger proportion of the Club membership served with the armed forces during 1914-18 than during 1939-45, the second World War had a more disrupting effect upon the Club generally, owing to the absence from the Club meetings of many members involved in war work, although not on active service. In this connection, two factors provide an illustration of the greater impact upon civilian life of this second conflict. The first is that in 1941 it was considered expedient to limit the meetings of the Club to one per month for the duration of the war, and the second is the much greater proportion of evenings devoted to matters arising out of the war. From 1914 to 1918 there were only four out of 51 evenings on which the paper presented was inspired by war-time activities, compared with ten out of 47 during the period 1939 to 1945.

This communication has dealt mainly with the internal affairs and scientific activities of the Club, but perhaps it might be pertinent to mention that the members have never lost sight of the fact that its standing in the community confers obligations, and consequently when matters have arisen requiring the voice of scientific opinion, the Club has not hesitated to approach both Dominion and Provincial officials. It has also, from its somewhat limited funds, responded generously to appeals, whether on a national scale, for sundry charities during the war periods, or locally, as for example, the guarantee fund in connection with the Winnipeg meeting in 1928 of the Royal Society of Canada.

The presentation of this brief historical sketch has been actuated by a desire to set before the present members the aims and ideals of the founders of this Club, and its accomplishments under the guidance of those original members and the men they elected to succeed them. We, the present members, have an inheritance of some value; unless we elect to modify the original objective of the Club, we are obligated to further that objective to the best of our abilities or cease to be members. That objective is the encouragement of research. We are emerging from the war years, a period of great difficulty for the Club and rendered more so by following immediately after the doldrums of the late thirties. Yet amongst the Club's most successful and productive years were those of 1920 and 1921, following the cessation of hostilities of the First World War. It is hoped that we may provide history with the opportunity of once again repeating itself.

I. ORIGINAL MEMBERS

Present at First Meeting, October 24, 1905

F. Allen	Life Member
Gordon Bell	Deceased
A. H. R. Buller	Deceased
R. R. Cochrane	Deceased
M. A. Parker	Life Member
W. Harvey Smith	Deceased
F. Torrance	Deceased
Swale Vincent	Deceased

Elected, November 21, 1905

R. J. Blanchard	Deceased
A. J. Douglas	Deceased
W. Webster	Deceased

Elected, December 5, 1905

H. Evans	Resigned, 1908
R. W. Kenny	Resigned, 1907
	Re-elected, 1934
J. Macdonnell	Resigned, 1909

II. OFFICE BEARERS, 1905 - 1945

Honorary Secretary

Swale Vincent	1905-20
A. T. Cameron (Co-Secretary)	1910-15
H. P. Armes (Co-Secretary)	1915-16
H. S. Davis (Co-Secretary)	1916-17
J. S. Delury (Co-Secretary)	1917-19
A. T. Cameron	1920-27
A. Gibson	1927-34
F. Neave	1934-38
M. J. Ormerod	1938-40
H. H. Saunderson	1940-45

Honorary Treasurer

Swale Vincent	1905-07
A. H. R. Buller	1907-09
M. A. Parker	1909-30
H. P. Armes	1930-38
F. D. White	1938-45
A. W. Alcock (Acting)	1944-45

Recorder

F. Neave	1927-34
M. J. Ormerod	1934-38
C. W. Lowe	1938-45

III. FORMER MEMBERS

Including Corresponding Members
with
List of Communications to the Club

- Aikenhead, D. C., M.D.
1927-37
Opium and opium alkaloids. 1931-32.
- Aldridge, W. A., B.A., C.E.
1918-36; committee, 1923-25.
Feculiarities of bullets' flights. 1919-20.
Some effects of wind pressures during storms. 1919-20.
Asphalt and asphalt paving. (With A. Blackie). 1928-29.
The application in Winnipeg of a method to prevent the disintegration of Portland cement concrete by sulphate waters. (With A. Blackie). 1932-33.
- Allen, J. A., B.S., D.V.Sc.
1934-41
Virus diseases of fur bearing animals. 1934-35.
- Archibald, D. C., M.Sc., A.M.
1939-43
Weather forecasting. 1939-40.
- Bailey, D. L., B.A., M.S., Ph.D.
1926-28
Rust problems. 1927-28.
- Barrager, C. A., B.A., M.D., C.M.
1922-29
The problem of caring for the mentally ill. 1922-23.
- Bastin, C. E., B.A.
1912-35; corr. member, 1935; committee, 1914-17, 1929-32.
Mars. 1912-13.
Some physical features of the moon. 1914-15.
Astronomical notes. 1917-18.
- Bell, Gordon, B.A., M.D., C.M.
Original Member, 1905-23; committee, 1905-06, 1907-10, 1918-20.
Immunity. 1905-06.
Tuberculosis. 1908-09.
Our wild fowls. 1915-16.
- Bell, F. C., C.M.G., B.A., M.D.
1911-23; corr. member, 1923; committee, 1920-23.
Mountain sickness. 1912-13.
Notes on the narratives of some early North-west explorers. 1920-21.
- Bisby, G. R., M.A., B.Sc., Ph.D.
1920-28, 1930-36; committee, 1933-35.
Exhibit of plant diseases. 1920-21.
Potato disease in Manitoba. 1922-23.
An effect of light on fungi. 1924-25.
The distribution of the fungi. 1930-31.
The soil fungi and their significance. 1934-35.
- Birchard, F. G., B.A., Ph.D.
1914-30
The grading and milling of flour. 1916-17.
- Black, W. J.
1906-09
Work done in various departments by the Agricultural Experimental Stations and Agricultural Colleges in Canada. 1907-08.
- Boyd, G. I., M.D., F.R.C.S.(E).
1931-33
Primitive man in China. 1931-32.

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- Boyd, William, M.D., M.R.C.P.(Edin.), F.R.C.P.(Lond.), F.R.S.C.
1915-37; corr. member, 1937; committee, 1916-19.
Medicine and the war. 1915-16.
Brain tumour producing pituitary symptoms. 1915-16.
A method of staining museum specimens. 1915-16.
The cerebro-spinal fluid. 1917-18.
Encephalitis lethargica. 1919-20.
Some defences of the body. 1921-22.
Note on colloidal action in encephalitis. 1923-24.
Some tests for liver function. 1924-25.
Some aspects of heart disease. 1925-26.
Recent work on neuroglia and glial tumours. 1929-30.
Recent work on tumour growth. 1932-33.
- Bower, T. T.
1915-28; committee, 1917-21.
Some notes on firearms. 1926-27.
- Brydson-Jack, E.,
1907-10
The principles of testing machines. 1908-09.
- Buller, A. H. R., D.Sc., Ph.D., LL.D., F.R.S., F.R.S.C.
Original Member, 1905-30, life member, 1930-35; committee, 1905-07, 1915-17;
Treas. 1907-09.
Some recent phases of the evolution theory. 1905-06.
The liberation and distribution of fungus spores. 1906-07.
Some recent researches on mushrooms. 1908-09.
Chemotaxis and the fertilisation of the egg. 1909-10.
Reproduction in mushrooms and toadstools. 1910-11.
Some recent investigations upon fungi. 1911-12.
The potato canker. 1912-13.
On suspension of vitality in plants. 1912-13.
Spore discharge in the higher fungi. 1913-14.
Note on ice crystals and pillars of light. 1914-15.
Researches on the organization of the higher fungi. 1915-16.
The rust diseases of wheat and other cereals. 1916-17.
Some observations on the flora of Manitoba. 1917-18.
The origin and history of some Western wheats. 1918-19.
Carnivorous plants. 1919-20.
A remarkable fungus gun. 1919-20.
Chemotactic attraction of fungi for slugs. 1920-21.
The problem of sex in mushrooms and toadstools. (With Miss I. Mounce, guest). 1920-21.
The work and aims of the Biological Board of Canada. 1921-22.
Fungus guns and their modes of action. 1925-26.
Exhibit of blackfellow's bread. 1925-26.
A culture of the fungus *Coprinus sterquilinus*. 1927-28.
A specimen illustrating propagation of the banana. 1927-28.
Bioluminescence. 1928-29.
Demonstration of germination of pollen grains of Easter Lily. 1928-29.
Demonstration of club mosses. 1929-30.
The Mexican jumping bean. 1929-30.
Demonstration of mutations in smut fungus (*Ustilago Zeae*). 1929-30.
Conjugate nuclei in the basidiomycetes and their biological significance. 1929-30.
Sex and nuclear movement in mushrooms and toadstools. 1931-32.
Hyphal fusions and protoplasmic movement in the higher fungi. 1932-33.
- Burwash, E. N., M.A., B.D., Ph.D.
1919-32
The planetesimal hypothesis. 1919-20.
Lac Seul Archaen area. 1919-20.
Note on chalk in northern France. 1919-20.
The geology of the Rockies. 1920-21.
The geology of Departure Bay. 1921-22.

- Cameron, C. F., B.A., B.C.E., A.M.E.I.C.
1919-25
Foundations. 1921-22.
- Campbell, A. N., D.Sc., Ph.D., F.R.S.C.
1930-35
Liquid racemates and enantiomers 1930-31.
Smits' theory of allotropy with some projected experimental work.
(With S. Katz, guest, and H. Fanshaw, guest). 1934-35.
- Clark, A. B., M.A.
1913-18
The monetary situation as affected by the War. 1914-15.
- Craigie, J. H., A.B., M.Sc., Ph.D., F.R.S.C.
1931-45
Some experiments on sex in fungi. 1927-28.
Some experiments on the hybridization of rust forms. 1932-33.
The relation of wind to stem rust in Western Canada. 1942-43.
- Davis, H. S., M.A., Ph.D.
1914-18; Co-Sec. 1916-17.
Contributions to the study of solutions. 1914-15.
Critical opalescence and allied phenomena. 1915-16.
Supersaturated solutions of liquids in liquids. 1915-16.
Governmental organization of research in Great Britain and the British Empire. 1916-17.
The extraction of aromatic hydrocarbons from gases by means of liquid absorbents. 1916-17.
Rhythmic precipitation of colloidal mercury. 1916-17.
Thermostats (a) electrical control (b) relative efficiency of liquids in regulators. (With Mary Davis, guest). 1916-17.
The molecular elevation of the boiling point of toluene. (With David Allison, guest). 1916-17.
Fractional distillation. 1917-18.
- DeLury, J. S., B.A., Ph.D., F.R.S.C., F.G.S.A.
1915-44; corr. member, 1944; Co-sec. 1917-19.
Pre-Cambrian glacial deposits. 1915-16.
The Falcon Lake district, Manitoba. 1918-19.
Note on the occurrence of tin in Manitoba. 1919-20.
The petrograph method of determination of refractive indices. (With demonstration.) 1924-25.
The dynamics of glaciers. 1925-26.
Glaciers. 1926-27.
The pegmatites of Manitoba. 1930-31.
Earth movements; a hypothesis of crustal mechanics and dynamics. 1931-32.
Deductions from thermal gradients in the earth's crust. 1933-34.
Thermo-dynamics of the earth's interior. 1936-37.
- Dey, W. F., M.B.
1921-27.
Ojibway folklore. 1926-27.
- Dorrey, J. W., E.E., A.M.E.I.C., Assoc. A.I.E.E.
1910-35
Electric arc phenomena. 1911-12.
A mercury arc at constant pressure. 1914-15.
A new lock-out system for party lines. 1916-17.
Commutation and transmission. 1920-21.
Low temperature operation of automobile engines. 1921-22.
Demonstration of regenerative receiver for long distance radio sets. 1922-23.
Demonstration of a two-terminal argon rectifier. 1925-26.
Development of an A-B rectifier battery. 1926-27.
Note on ignition power and measurement of electric sparks. 1927-28.
- Evans, H.
1905-08; committee, 1906-07
Plant breeding. 1905-06.

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- Evatt, E. J., D.S.O., M.B., B.S.
1909-13; corr. member, 1913; committee, 1911-13.
Fingerprints. 1910-11.
Exhibition of Flat-head skull. 1911-12.
Exhibition of electro-thermostat. 1912-13.
- Finlayson, J. N., M.Sc., LL.D., M.E.I.C.
1920-36; corr. member, 1936; committee, 1922-25, 1933-35.
Bridges. 1920-21.
Bridge building. 1923-24.
The effect of alkalis on concrete. 1927-28.
Measurement of water by the salt-velocity method. 1928-29.
- Forster, E. L. C., M.A., F.C.I.C.
1917-35; committee, 1928-30.
Radio activity and energy. 1917-18.
Silica gels. 1930-31.
- Fraser, R. H., B.A., M.D., D.P.H.
1932-38
Some aspects of allergy in tuberculosis. 1931-32.
Some notes on influenza. 1936-37.
- Galbraith, A. J., B.S.A.
1917-18
Organic matter in soils. 1917-18.
- Gardiner, W. A., B.A., M.D., C.M., F.A.C.S.
1910-35; committee, 1929-31.
The effects of adrenal extirpation. 1910-11.
- Geddes, W. F., B.S.A., M.A., M.S., Ph.D.
1926-38; corr. member, 1938; committee, 1931-34.
Asparaginase. 1926-27.
Interim report on factors affecting the softness of lard. 1926-27.
The problems of commercial and experimental drying of wheat and wheat flour. 1928-29.
Demonstration of a new moisture tester for cereal grains. 1930-31.
Heat of hydration of wheat flour. 1930-31.
The spectrophotometer and some of its applications. 1933-34.
The activities of the Dominion Grain Research Laboratory. 1936-37.
- Gilmore, C. R., M.D., C.M., F.R.C.P.(C).
1922-41.
Note on methyl chloride poisoning. (With A. Blackie). 1927-28.
- Grant, J. C. B., M.C., M.B., Ch.B., F.R.C.S.(E).
1919-30; corr. member, 1930; committee, 1928-30.
Abnormalities of the aortic arch. 1920-21.
The Rhodesian prehistoric remains. 1921-22.
Physical measurements of Lake Winnipeg Indians. 1923-24.
Our arboreal ancestors. 1924-25.
Exhibit of a model of the Rhodesian skull. 1925-26.
The anthropometry of the North American Indian. 1928-29.
- Gregory, P. H., B.Sc., Ph.D.
1934-35
Preliminary notes on fluorescence in fungus-infected hairs. (With A. M. Davidson). 1931-32.
Problems in the life history of skin fungi. 1933-34.
- Hague, O. G., M.D., D.Rad., F.R.C.P.(Can.).
1932-38
The spectrum and its medical applications, with remarks especially on short wave radiotherapy. 1934-35.
- Halpenny, J., M.A., M.D., C.M., F.A.C.S.
1908-26; corr. member, 1926-30.
An operation for intestinal anastomosis. 1907-08.
Results of extirpation of the parathyroids. 1908-09.
The results of extirpations of thyroids and parathyroids. 1910-11.
Summary of Alexis Carrel's work on suturing of blood vessels. 1912-13.

- Hodgson, R. T., M.A.
 1911-45; committee, 1912-15.
 Glacial geology as studied on the Corundum Belt of Canada. 1911-12.
 Note on the shore action of ice. 1914-15.
 Cambrian trilobites from Mount Stephen. 1926-27.
- Hugg, J. B., B.A.
 1907-08, 1909-14.
 Recent researches upon the nature of mind. 1907-08.
 The fisheries of Manitoba. 1909-10.
- Hunter, C., M.A., M.D., F.R.C.P.(Lond), F.R.C.P.(C).
 1909-11, 1925-36
 The nervous temperament. 1909-10.
 Psycho-analysis and its influence on McDougall and Hamilton. 1926-27.
- Inkster, R. G., M.D.
 1931-36; corr. member, 1936.
 Form in relation to function. 1932-33.
- Jackson, J. L., M.A., M.B.
 1930-35
 Age changes in the human aorta. 1932-33.
- Jackson, V. W., B.A., M.S.
 1917-42; corr. member, 1942; committee, 1924-26.
 Flowers and colour photography. 1917-18.
 Exhibit in the breeding of goldfish. 1920-21.
 Reproduction of marsilia in relation to biogenesis. 1930-31.
 The sex chromosome. 1924-25.
 Note on Tylenchus on Hordeum jubatum. 1925-26.
 The Tarawera eruption and the Napier earthquake. 1931-32.
 Demonstration: secondary wood and pitted vessels in Callixylon erianum - Arnold - in Upper Devonian. 1931-32.
 New Zealand, its flora and fauna; the Maori. 1931-32.
 Recent name changes in our vertebrate fauna. 1934-35.
 Albinism in animals. 1936-37.
 Viviparous fish. 1937-38.
 The giant chromosome. 1938-39.
- Kingston, H. R., M.A., Ph.D.
 1915-21
 Clocks, ancient and modern. 1916-17.
 The new star of 1918. 1918-19.
- Kirk, S. R., B.Sc., Ph.D.
 1928-34; committee, 1931-34.
 Note on Ordovician fishes. 1927-28.
 Cretaceous stratigraphy of Manitoba. 1929-30.
 Demonstration: salt hopper from the Silurian. 1931-32.
- Lake, H. B., A.M.I.M.E.
 1907-13
 Thermal waters of Western Canada. 1907-08.
 Memorandum of the discovery of remains of a buffalo's skull and horn. 1912-13.
- Langstroth, G. O., Ph.D., F.R.S.C.
 1944-45
 Analysis with the spectrograph. 1941-42.
- Leeming, J. H., M.D.
 1906-22; corr. member, 1922-1940; committee, 1909-13.
 Recent work on typhoid. 1906-07.
 Chromaffin tissues in vertebrates. 1906-07.
 Method of Wright for determining and raising the opsonic index. 1907-08.
 Chromaffin cells and the medulla of the suprarenal cortex. (Demonstration). 1907-08.
 Immunity. 1911-12.
 Toxin and anti-toxin immunization in diphtheria. 1921-22.
- Lehmann, J. E., M.D., M.R.C.S., L.R.C.P., F.A.C.S.
 1908-34; committee, 1913-16.
 The architecture of bone. 1909-10.
 Observations on the effects of ice on shore life. 1915-16.

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- Little, J. S., M.A., B.Sc.
1911-15.
Response in plants to external stimuli. 1911-12.
- Mackersie, W. G., B.Sc. (Med.), M.D.
1925-27
Biological standardization of drugs, with a demonstration of the standardization of pituitary extract. 1925-26.
- Mackinnon, A. P., M.D., C.M., F.A.C.S., F.R.C.S.(C).
1923-45
Six years advance in roentgenography in Winnipeg. 1925-26.
- Maclean, N. B., D.S.C., M.A., Ph.D., F.R.A.S.C.
1907-27; corr. member, 1927; committee, 1909-10.
Certain aspects of the history of astronomy. 1907-08.
Evolution of the solar system. 1910-11.
The spectroscope and spectroheliograph in astronomical work. 1913-14.
Modern artillery and its employment. 1919-20.
Some famous problems in mathematics. 1922-23.
- Mathers, A. T., M.D., C.M., F.R.C.P.(C).
1921-35; committee, 1927-29.
Investigation of juvenile delinquency. 1921-22.
- McClung, R. K., M.A., B.Sc., F.R.S.C.
1909-15; committee, 1912-14.
Demonstration on the tone variator. 1909-10.
The measurement of minute physical quantities. 1909-10.
Vacuum electric discharges. 1911-12.
Demonstration of physical and electrical apparatus. 1913-14.
- McCrostie, G. P., M.S.A., Ph.D.
1932-36; committee, 1935-36.
The artificial drying of fodder plants. 1931-32.
Synthetic inheritance in plants. 1933-34.
- McGibbon, R. T., M.B., Ch.B.
1923-26; corr. member, 1926-35.
The passing of the Anatomy Act. 1923-24.
- McKay, I. A., M.A., Ph.D.
1906-10; corr. member, 1911-34.
The psychology of the skin. 1906-07.
The perception of depth. 1909-10.
- McLean, D. L., B.Sc., A.M.E.I.C.
1923-34; committee, 1932-33.
Red River floods. 1924-25.
- McMillan, J. C., M.D., F.A.C.P., F.R.C.P.(C).
1923-35
High voltage x-ray as a therapeutic agent. 1923-24.
- Miller, C. B., S.B., Ph.D.
1920-24
Electrolytic condensers. 1920-21.
Light waves and the measurement of distance. 1921-22.
Demonstration of simple radio receiving sets. 1922-23.
- Morden, G. W., M.D., Dr. Eng., Ph.D.
1912-14
Electro-analysis. 1912-13.
- Neave, F., M.Sc.
1926-38; corr. member, 1938; Rec. 1927-34; Sec. 1934-38.
Some hymenopterous parasites. 1925-26.
The mechanism of heredity. 1928-29.
The biology of the Prairie lakes. 1929-30.
Some interesting problems in animal development. 1933-34.
- Nowlan, F. S., B.A., A.M., Ph.D.
1923-26
A note on the representation of integers by certain ternary cubic forms. 1925-26.
The romance of numbers. 1925-26.

- O'Donoghue, C. H., D.Sc., F.R.S.E., F.R.S.C., F.Z.S.
 1919-27; corr. member, 1927; committee, 1921-24.
 The vascular system of the Tuatara. 1918-19.
 Nudibranchs of the northern Pacific. 1919-20.
 Exhibit of a fossil fish from Ontario. 1919-20.
 The use of coral in Japanese ornaments. 1920-21.
 Notes on Berens Island. 1920-21.
 A new fish parasite. 1921-22.
 A large tube-building marine worm. 1921-22.
 Exhibit of a collection of Polyzoa. 1921-22.
 Nudibranchs and Polyzoa of the Strait of Georgia. (With Mrs. O'Donoghue, guest). 1921-22.
 What's in a name. 1922-23.
 Abrolhos opisthobranchia. 1922-23.
 Note on Starfish. 1923-24.
 Exhibit of a snake from Honduras introduced into Winnipeg in a consignment of bananas. 1923-24.
 Exhibit of the head of the Thresher Shark, *Alopias vulpes*. 1926-27.
 Demonstration of a fish-measure. 1926-27.
 Some notes on the plankton of Jasper Park. 1926-27.
 On the facilitation and inhibition of muscular action. (With F. Allen). 1926-27.
- Parsons, J. D., B.Sc.
 1915-17
 Protein fevers. 1915-16.
 The valves of the jugular vein. 1915-16.
 The pulmonary circulation. 1915-16.
 The islets of Langerhans in the pancreas. (With Swale Vincent). 1915-16.
 The structure and function of the pancreas. 1916-17.
 The islets of Langerhans. (With Swale Vincent). 1916-17.
 The nature of the splanchnic rise of blood pressure. (With Swale Vincent). 1916-17.
- Pierce, S. J. S., B.A., M.D., C.M.
 1908-18; corr. member, 1918; committee, 1915-18.
 An account of the Lumiere process of colour photography. 1908-09.
 The epidemiology of typhoid fever. 1908-09.
 Anti-typhoid inoculation. 1912-13.
 Some new phases of the Wassermann reaction. 1916-17.
- Pope, E. L., B.A., M.D., C.M., M.R.C.S., L.R.C.P.
 1908-13
 Medicine and her offspring. 1910-11.
- Prowse, S. W., B.A., M.D., C.M., F.R.C.S.(E), F.A.C.S.
 1906-11, 1912-31; committee, 1908-11, 1913-15.
 Colour blindness. 1906-07.
 The semicircular canals. 1913-14.
- Riley, C. F. Curtis, M.A., M.Sc.
 1931-33
 Some phases in the natural history of water striders. 1930-31.
- Roberts, H. F., B.A., M.Sc., LL.B., F.A.A.S.
 1919-37
 A new method of ear-row breeding in Indian corn. 1919-20.
 Polarity in salix. 1921-22.
- Sanger, J. W., A.M.E.I.C.
 1924-38; committee, 1925-28.
 The power control of the Winnipeg River watershed. 1924-25.
 Exhibit of a curious tree growth. 1926-27.
 Determination of capacity of power sites on the Winnipeg River. 1927-28.
- Shipley, J. W., M.A., Ph.D., F.C.I.C., F.R.S.C.
 1908-10, 1915-30; corr. member, 1930-43; committee, 1918-21.
 The dissemination of fruits and seeds. 1908-09.
 The volcanic eruption of Mount Katmai, Alaska. 1917-18.

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- The compressibility of the atom and pressures up to 20,000 atmosphere. 1919-20.
Demonstration of critical phenomena. 1920-21.
Demonstration of the potentiometer method for determining hydrogen-ion concentration. (With Mr. McHaffie, guest). 1921-22.
pH. (With A. T. Cameron). 1921-22.
Equilibrium between calcium sulphate, calcium carbonate, and carbonic acid in water solution. (With Mr. McHaffie, guest). 1921-22.
The soil corrosion of iron and steel. 1922-23.
Demonstration of DeNouy's surface tension phenomenon. 1925-26.
Explosive gases generated in electric water heaters and boilers operated on alternating current. (With A. Blackie). 1925-26.
A. C. electrolysis in relation to current density and metal electrodes. (With Mr. Goodeve, guest). 1926-27.
The pulp and paper industry of Canada - rayon. 1927-28.
Alternating current electrolysis of water in respect of (a) frequency, (b) arcing. 1927-28.
- Smith, S. Alwyn, D.S.O., M.D., M.Ch., F.R.C.S.(E)
1912-19
Recent investigations on poliomyelitis. 1913-14.
- Southworth, W., B.S.A., M.Sc., F.L.S.
1919-23
The influence of the root system in promoting hardiness in alfalfa. 1920-21.
Exhibit of corn breeding. 1920-21.
- Stephens, G. F., M.D.
1911-15, 1920-29.
Nerve regeneration. 1912-13.
The scientific side of hospital management. 1924-25.
- Thorvaldson, T., B.A., A.M., Ph.D., D.Sc., F.C.I.C., F.R.S.C.
1907-10; corr. member, 1922.
The fixation of atmospheric nitrogen. 1907-08.
Recent methods of determining atomic weights. 1922-23.
- Torrance, F., B.A., D.V.S.
Original member, 1905-12; corr. member, 1912-24; committee, 1905-09, 1910-13.
Larval parasites. 1905-06.
Experiments on extirpation of thyroids and parathyroids. 1905-06.
- Unkauf, B. M., M.D., B.Sc.(Med.), Ph.D.
1936-38
The physiological significance of the ganglionic tissue of the human stomach. 1935-36.
- Vincent, Swale, M.D., D.Sc., LL.D., M.R.C.S., L.R.C.P., F.R.S.E., F.R.S.C.
Original Member, 1905-20; corr. member, 1920-33; Sec. Treas. 1905-07; Sec. 1907-20.
The suprarenal capsules. 1905-06.
Structure of the islets of Langerhans in vertebrates. 1905-06.
Islets of Langerhans in elasmobranch fishes. (With Mrs. Thompson, guest). 1906-07.
Demonstration of muscle currents. 1907-08.
Demonstration of some little known organs in the frog. 1907-08.
Localization of function in the brain. 1908-09.
Chromaphil tissues. 1909-10.
Artificial fertilization of frogs' eggs. 1911-12.
The role of iodine in the animal economy. 1911-12.
Intravital staining of chromaphil tissues. 1911-12.
Some abdominal reflexes. (With W. Webster). 1911-12.
The pharmacological action of the radium group of elements. (With A. T. Cameron). 1911-12.
Demonstration of a respiration reflex in the frog. 1913-14.
Some observations on vasomotor reflexes. 1913-14.
The physiological effects of music. 1913-14.

- The search after the function of the pituitary body. 1914-15.
 The external secretion of adrenaline. 1914-15.
 The relative importance to life of the medulla and cortex of the adrenal bodies. (With T. D. Wheeler, guest). 1914-15.
 The work of the Club during its first ten years. 1914-15.
 The beginnings of music. 1915-16.
 Note on the effect of nervous tissue extract on the flow of the urine. 1915-16.
 The islets of Langerhans in the pancreas. (With J. D. Parsons). 1915-16.
 The islets of Langerhans. (With J. D. Parsons). 1916-17.
 The nature of the splanchnic rise of blood pressure. (With J. D. Parsons). 1916-17.
 The relationship between thyroids and parathyroids in the rabbit. (With Mr. Arnason, guest). 1916-17.
 New work on vitamins. 1918-19.
 Note on the vasomotor reflexes. 1919-20.
 The effect of inanition on the adrenal bodies. (With Mr. Hollenberg, guest). 1919-20.
 A respiratory reflex in the frog. (With A. T. Cameron). 1919-20.
 The respiratory reflex in vertebrates. (With A. T. Cameron). 1919-20.
 Vrooman, C. H., M.D., C.M.
 1907-11; corr. member, 1911.
 Method of studying the heat rigor of muscle (demonstration). 1906-07.
 Wallace, R. C., C.M.G., M.A., D.Sc., Ph.D., LL.D., F.G.S., F.R.S.C.
 1910-28; corr. member, 1928; committee, 1913-16.
 The problem of igneous rocks. 1910-11.
 The mottling of the Tyndal lime stones. 1911-12.
 A further contribution on the Tyndal lime stones. 1912-13.
 The Rice Lake gold district in Manitoba. 1912-13.
 Creation from geological and biblical standpoints. 1913-14.
 Investigations on gypsum and salt in Manitoba. 1913-14.
 Some water horizons in Manitoba. 1914-15.
 The corrosive action of salt water. 1915-16.
 An isolated Pre-Cambrian surface and certain unusual rock types. 1915-16.
 Mining developments in Manitoba. 1916-17.
 Some northern problems. 1921-22.
 Secondary processes in Pre-Cambrian ore bodies. 1921-22.
 Crystal detectives. 1922-23.
 Description of the geological and mineralogical museum. 1922-23.
 The Lake Agassiz clay beds. 1923-24.
 Seasonal deposition of clays. 1925-26.
 Exhibit of mottled lime stone. 1926-27.
 Some characteristics of sands. 1926-27.
 Varves and banded rocks. (With H. J. Fraser, guest). 1926-27.
 The problem of the mottled lime stones. 1927-28.
 Webster, W., D.S.O., M.D., C.M.
 1905-34; committee, 1906-11, 1919-22.
 Physiological action of ethyl chloride, bromide, and iodide. 1905-06.
 Physiological action of atropine and allied drugs. 1906-07.
 Choline in nerve degeneration (demonstration). 1907-08.
 Internal combustion motors. 1909-10.
 The nature of surgical shock, and the action of pituitary extracts. 1910-11.
 Some abdominal reflexes. (With Swale Vincent). 1911-12.
 The revolver. 1912-13.
 The history of anaesthesia. 1914-15.
 A dressing station on the Somme. 1919-20.
 Some new anaesthetic ethers. 1921-22.
 Burning powder. 1923-24.
 Wilson, R. P., B.Sc.
 1909-19; committee, 1910-12.
 The subjective mind. 1910-11.

IV. FORMER MEMBERS Other than the Preceding

Allum, A. W., M.D., C.M. (1910).
Atherton, W. A., B.A., A.C.I.C. (1942-43).
Bajkov, A., M.Sc., Ph.D. (1929-36).
Batho, H. F., B.A., S.M., Ph.D. (1937-45).
Bedford, G. V., M.D. (1934-43).
Blanchard, R. J., M.D., C.M., LL.D., F.A.C.S. (1905-28; committee, 1907-08, 1919-23).
Borden, L. E., M.D. (1906-07).
Brown, J. M., B.S.A. (1923-25).
Bunnett, E. J., M.A. (1912).
Campbell, A. M., B.A., M.D., C.M. (1914-20).
Carson, W. T., (1906-09).
Chown, Gordon, O.B.E., B.A., M.D., C.M., F.R.C.P.(C). (1934-38)
Clavenger, C. B., Ph.D. (1923-25).
Cochran, R. R., B.A. (Original Member, 1905-10; committee, 1905-06).
Connors, I. L., M.A. (1927-30).
Deacon, T. R., B.Sc. (1908-11).
Devine, J. A., D.S.O., M.A., M.D., B.Ch. (1906-12).
Dickenson, E. J., M.C., M.D., C.M. (1919-20).
Douglas, A. J., B.A., M.D., C.M. (1905-10).
Duff, W. A., B.Sc. (1908-09).
Edgecombe, S. W., B.S.A., M.S., Ph.D. (1943-44).
Edwards, H., A.B. (1921-23).
Gray, J. S., M.D. (1906-07).
Greig, A., (1906-10).
Hanson, E. C. A. (1919).
Humphreys, E. (1909-12).
Ingvaldsen, T., M.S., Ph.D. (1923-24).
Johannsson, J. G., B.A. (1912-13).
Jones, Tudor, M.B., Ch.B. (1926-27).
Macdonnell, J., M.D. (1905-09; committee, 1906-08).
Mackay, D. S., O.B.E., M.D., C.M., F.R.C.S.(E), F.A.C.S. (1920-42; Life member, 1942-43; committee, 1923-26).
MacLean, J. A., M.A., Ph.D., LL.D. (1913-23).
Mann, W. L., B.A., M.D., C.M., F.A.C.S. (1921-36).
McCoubrey, A. A., F.R.G.S., M.C.I.M.M. (1934-42).
McIntosh, H., B.A. (1919-20).
Nelson, W. K., B.Sc. (1917).
Nicholson, J. R. W., M.D. (1921-22).
Paling, A., M.D., B.S., F.R.C.S., L.R.C.P. (1911-14).
Palmason, J. H., B.Sc., (C.E.). (1943-44).
Rutherford, Prof. (1906-08).
Smith, W. Harvey, M.D., C.M. (Original Member, 1905-07, 1908-10; committee, 1905-06).
Sproule, M. F. (1912-17).
Stephenson, H. I. (1938-43).
Thomson, L. R., B.A.Sc. (1910-11).
Todd, J. O., M.D. (1908-10).
Triggerson, C. J., M.A., Ph.D. (1910-17).
Waugh, O. S., M.D., C.M., F.A.C.S. (1914-35).
Wemyss, D. M., LL.B. (1907-12).
Will, J. J., B.A. (1907-10).
Wilson, N. R., M.A., Ph.D., F.R.S.C. (1907-10, 1926-44).
Young, T. H. (1911-16).

V. PRESENT MEMBERS
Including Life Members
with
List of Communications to the Club

- Abbott, A. C., B.A., M.D., C.M., F.R.C.S.(E), F.R.C.S.(C).
 1934
 Researches on the life history of the thyroid gland. 1933-34.
- Adamson, J. D., B.A., M.D., M.R.C.P., F.R.C.P.(C).
 1937; member, 1920-36; committee, 1926-29.
 Physiological variations in blood pressure. 1924-25.
 Blood pressure. 1940-41.
- Alcock, A. W., F.C.I.C.
 1923; committee, 1925-28; Acting Treas., 1944-45.
 The influence of diastatic enzymes on flour quality. 1923-24.
 Demonstration on the structure of bread-doughs. 1926-27.
 Early history of milling. 1930-31.
 The B-vitamins and wheat flour. 1941-42.
- Allen, F., M.A., Ph.D., LL.D., F.R.S.C.
 Life member, 1930; Original Member, 1905-30; committee, 1905-06, 1910-12,
 1920-22.
 Theories of colour vision. 1905-06.
 The spectroscope. (Demonstration with M. A. Parker). 1905-06.
 Fluorescence and phosphorescence. 1906-07.
 Demonstration of a lunar photograph and spectral photographs. 1907-08.
 Contributions of the late Lord Kelvin to physics. 1907-08.
 Polarized light. 1908-09.
 Colour vision curves. 1909-10.
 Helium. 1911-12.
 Interference and diffraction of light. 1913-14.
 Neutral points in the spectrum. 1915-16.
 The principles of artillery. 1917-18.
 Architectural acoustics. 1917-18.
 Studies in colour-vision. 1918-19.
 Relativity. 1919-20.
 An illustration of Konig's duplicity theory of vision. 1919-20.
 Demonstration of the Zeeman effect. 1920-21.
 Demonstration of the rotation of the plane of polarization and of
 Haidinger's brushes. 1920-21.
 Atomic numbers. 1921-22.
 Reflex visual sensations. 1922-23.
 Reflex origin of colour contrasts. 1923-24.
 The sensory tactile reflex. (With A. Hollenberg, guest). 1923-24.
 The gustatory sensory reflex. (With Miss Mollie Weinberg, guest).
 1924-25.
 How our senses act. 1925-26.
 On the facilitation and inhibition of muscular action. (With C. H.
 O'Donoghue). 1926-27.
 Variation of sensory reflexes with intensity of stimulation. 1927-28.
 The salivary reflex. 1928-29.
 The unitary action of the nervous system. 1929-30.
 A note - Learning and memory. 1930-31.
 The Faraday Maxwell centenaries. 1931-32.
 The influence of one sense upon another. (With M. Schwartz, guest).
 1939-40.
 Vision through tubes. 1944-45.
 The oscillatory effect. 1944-45.

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- Allgood, R. W., M.A., Ph.D., F.C.I.C.
1943
The manufacture of cordite. 1943-44.
- Anderson, W. A., M.Sc., M.A.
1930; committee, 1937-40.
The statistical method applied to examinations. 1929-30.
- Anderson, J. A., M.Sc., Ph.D., F.C.I.C., F.R.S.C.
1940; committee, 1944-45.
Variation in the protein content of Canadian wheat and related problems.
1940-41.
- Armes, H. P., B.Sc., Ph.D., F.C.I.C.
Life member, 1936; member, 1909-36; Co.-Sec., 1915-16; Treas., 1930-38.
Electric smelting. 1910-11.
The rare gases of the atmosphere. 1911-12.
The synthesis of rubber. 1913-14.
Chemistry and the war. 1915-16.
Demonstration of the rotation of plane polarized light. 1919-20.
Dyes and dyeing. 1924-25.
A reaction of nitro compounds. 1927-28.
- Austmann, K. J., M.A., M.D.
1939; member, 1916-26.
A respiration reflex. 1915-16.
An ether-saving apparatus for anaesthetics on animals. 1915-16.
The functions of the Chromaphil tissues. (With Mr. Halliday, guest).
1915-16.
A note on the cerebro spinal fluid and the ventricles of the brain.
1921-22.
- Bell, L. G., M.D., M.R.C.P.(London).
1934
The red blood cells in health and disease. 1934-35.
Pain as a symptom. 1940-41.
- Bell, P. G., D.S.O., B.A., M.D., F.A.C.S.
1913; committee, 1924-27.
Night blindness. 1921-22.
- Beveridge, J., A.R.T.C.
1926
Tin mining in Lower Burma. 1926-27.
- Blackie, A., F.C.I.C.
Life member, 1939; member, 1908-39; committee, 1916-20.
Some recent applications of fuels. 1909-10.
Exhibit of *Necturus maculatus*. 1912-13.
Water temperatures at Shoal Lake. 1914-15.
Exhibit of synthetic essences used for illegal beverages. 1921-22.
Explosive gases generated in electric water heaters and boilers
operated on alternating current. (With J. W. Shipley). 1925-26.
Note on methyl chloride poisoning. (With C. R. Gilmour). 1927-28.
The occurrence of solanin poisoning from potatoes. 1928-29.
Asphalt and asphalt paving. (With W. F. Aldridge). 1928-29.
The application in Winnipeg of a method to prevent the disintegration
of Portland cement concrete by sulphate waters. (With W. F. Aldridge).
1932-33.
- Blanchard, J. F., B.S.A., M.A., M.C.I.C.
1938
Alias Marijuana. 1942-43.
- Bletcher, H. E., B.Sc.(Phar.), F.C.I.C.
Life member, 1939; member, 1908-39; committee, 1910-14.
Resins. 1935-36.
- Bowie, D. J., B.Sc.(Med.), M.A., Ph.D.
1938
Gastric glands. 1938-39.
- Bowman, M., M.D., D.P.H.
1945

- Broderick, F. W., B.S.A.
 1921; member, 1907-09; committee, 1928-31.
 Some problems in fruit improvement. 1922-23.
 Forests and forest trees. 1927-28.
 Some interesting geological and botanical features of Yellowstone Park. 1933-34.
- Brodie, H. J., M.Sc., Ph.D.
 1937
 The Oidia of *Coprinus lagopus* and their dispersion by insects. 1929-30.
 Plant hormones. 1938-39.
 Spores that germinate at low humidity. 1941-42.
- Brownell, G. M., M.Sc., Ph.D.
 1930; committee, 1941-45.
 The determination of ore minerals by the use of the reflecting microscope. 1929-30.
 Gypsum, the Amaranth deposit. 1931-32.
 Microscopic features of Flin Flon ore. 1933-34.
 The geology of the Falcon Lake stock and the Sunbeam-Kirkland Mine. 1940-41.
 The chromite deposits of the Bird River, Manitoba. 1943-44.
- Cadham, F. T., B.A., M.D., F.A.C.P., F.R.C.P.(C).
 1922; member, 1908-10; committee, 1934-36.
 The Bacteriophage. 1928-29.
- Cameron, A. T., M.A., D.Sc., F.R.I.C., F.C.I.C., F.R.S.C.
 Life member, 1936; member, 1910-36; Co-Sec. 1910-15; Sec. 1920-27.
 The radioactive sciences. 1909-10.
 The pharmacological action of the radium group of elements. (With Swale Vincent). 1911-12.
 Recent work on proteins. 1912-13.
 Note on recent work on atomic transformations. 1912-13.
 The effect of low temperatures on cold-blooded animals. (With Mr. Brownlee, guest). 1912-13.
 The work of the Nanaimo Biological Station. 1913-14.
 Method of Indian burial in Vancouver Island. 1913-14.
 The distribution of iodine in plants and animals. 1913-14.
 The effect of low temperature on the frog. 1913-14.
 Note on a goitre in an Elasmobranch fish. 1914-15.
 Further experiments on the limits of temperature compatible with life in the frog. (With Mr. Brownlee, guest). 1914-15.
 On an accumulation of gas in the tissues of the frog as a result of prolonged submersion in water. (With Mr. Brownlee, guest). 1914-15.
 War and water. 1919-20.
 Curved crystals. 1919-20.
 The effect of thyroid feeding on growth in white rats. (With Mr. J. Carmichael, guest). 1919-20.
 The respiratory reflex in vertebrates. (With Swale Vincent). 1919-20.
 The essential compounds secreted by the thyroid gland. 1920-21.
 The nature of chlorine combinations in urine. (With Mr. Hollenberg, guest). 1920-21.
 Demonstration of a retinal reflex in the frog, following benzene administration. (With Mr. Sedziak, guest). 1920-21.
 The Biological Station at Nanaimo and its surroundings. 1921-22.
 A study of the waters of the Strait of Georgia. 1921-22.
 Reaction to darkness in narcotised animals. 1921-22 .
 pH. (With J. W. Shipley). 1921-22.
 The chemistry of diabetes and insulin. 1922-23.
 Results of rat-feeding experiments with thyroid and adrenal cortex. 1922-23.
 The bromine-iodine ratio in plant and animal tissues. 1922-23.
 Some recent work in endocrinology. 1923-24.
 Parathyroid tetany and blood and cerebrospinal fluid calcium. (With V. H. K. Moorhouse). 1924-25.
 Note on tests of Collip's parathyroid extract. (With V. H. K. Moorhouse). 1924-25.

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- The quantitative evaluation of thyroid preparations. 1925-26.
A note on the plasma and cell chloride content of the blood in various conditions. 1926-27.
Note on variations in the blood calcium of white rats. 1927-28.
Note on reciprocal relationship between haemoglobin and chloride in red cells. 1927-28.
The work of the Biological Board of Canada. 1928-29.
The number of molecules and ions in the living cell. 1929-30.
The relation between vitamins and the thyroid. 1929-30.
A native West African industry. 1931-32.
Notes on the physical chemistry and biochemistry of creatine. 1931-32.
Some notes on vitamins. 1931-32.
A note on vitamin C. 1932-33.
Some recent interesting advances in endocrinology. 1932-33.
The master gland of the body. 1933-34.
The endocrine control of human reproduction. 1935-36.
Recent achievements of the Biological Board of Canada. 1936-37.
Use of heavy water in metabolic studies. 1937-38.
Note on chemistry of viruses. 1937-38.
- Cartwright, B. W.
1936
Ducks Unlimited. 1940-41.
- Cavers, J. R., B.S.A., M.S.
1943
- Chown, H. Bruce, M.C., B.A., M.D.
1934; committee, 1938-41.
Some aspects of mineral metabolism. 1935-36.
Vitamin A deficiency. 1938-39.
- Cole, G. E., B.A., B.Sc., Assoc. M.E.I.C., M.C.I.M.M.
1934; committee, 1937-40.
The flotation process - most modern of metallurgical methods. 1936-37.
Unlocking Canada's treasure trove. 1938-39.
- Darracott, W. H.
1937
- Davidson, A. M., M.D., M.B., Ch.B., M.R.C.P.(E), F.R.C.P.(C).
1927
Motion picture film - The Cuckoo's Secret. 1929-30.
Dermatophytes of Manitoba. (With Miss Silver Dowding, guest, and J. F. T. Young). 1930-31.
Preliminary notes on fluorescence in fungus-infected hairs. 1931-32.
Demonstration of ringworm infection in a kitten. 1932-33.
- Doan, K. H., M.A., Ph.D.
1945
- Dyment, J. T., B.A.Sc.
1940
Flight - why an aeroplane is built that way. 1940-41.
- Ellis, J. H., B.S.A., M.S.
1931; committee, 1937-39.
The mapping and classification of the soils of the Red River Valley. 1930-31.
Podzolisation of the soils in the North-western drift. 1932-33.
The alkalisation process in Manitoba soils. 1934-35.
The drought situation in South-western Manitoba. 1934-35.
- Evans, D. W., B.Sc., M.C.I.C.
1942
- Fahrni, G. S., M.D., Ch.M., F.A.C.S., F.R.C.S.(C).
1922
Some disorders of the thyroid gland. 1927-28.
Exhibit of a banded duck. 1928-29.
- Fetherstonhaugh, E. P., M.C., B.Sc., D.Sc., M.E.I.C., Assoc. A.I.E.C.
Life member, 1939; member, 1908-39; committee, 1908-09, 1914-15.
Recent advances in electric lighting. 1908-09.
Lightning protective apparatus. 1910-11.

- Some remarks on the defences of the Canadian Corps area. 1919-20.
 The calculation and measurement of illumination. 1924-25.
 Some notes on long distance transmission. 1925-26.
 Photo-electric cells. 1929-30.
 Demonstration of the cathode ray oscilloscope. 1936-37.
- Fowler, N. M., B.S.A.
 1944
- Gibson, A., M.A., M.B., Ch.B., F.R.C.S.(Eng.), F.R.S.E.
 Life member, 1940; member, 1914-40; committee, 1917-18, 1922-24;
 Sec. 1927-34.
 Specimen illustrating persistent Left Superior Vena Cava. 1914-15.
 Artificial deformation of the human body, with special reference to
 a Flat-head skull. 1917-18.
 Facial paralysis. 1920-21.
 The mechanics of the human foot in walking. 1921-22.
 Some medical points from Ancient Egypt. 1923-24.
 The effect of sympathectomy on muscle power. (With V. H. K. Moor-
 house). 1931-32.
 The reproduction of colour. 1935-36.
 The reaction of bone to metal. 1941-42.
- Goulden, C. H., M.S.A., Ph.D., F.R.S.C.
 1930; committee, 1942-44.
 Some principles of statistics. 1928-29.
 The design of experiments. 1937-38.
 Colour photography. 1939-40.
- Greaney, F. J., B.S.A., M.S., Ph.D.
 1935; committee, 1939-42.
 Antagonism of micro-organisms toward phyto-pathogenic fungi.
 1936-37.
- Gunn, J. A., C.B., O.B.E., B.A., M.D., F.A.C.S., F.R.C.S.(C).
 Life member, 1941; member, 1910-41; committee, 1939-42.
 The surgery of the Renaissance. 1932-33.
- Hall, N. M., O.B.E., B.Sc., M.E.I.C., M.A.S.M.E.
 1923; committee, 1938-41.
 Notes on the subject of heating and ventilation. 1923-24.
 Modern principles in ventilation. 1929-30.
- Hanna, W. F., C.B.E., Ph.D., F.R.S.C.
 1929; committee, 1936-38.
 Spore size and its inheritance in fleshy fungi. 1923-24.
 New growths in plants. 1929-30.
 Vernalization. 1933-34.
 Aircraft in the service of science. 1938-39.
- Hiebert, P. G., M.A., M.Sc., Ph.D.
 1924
 Recent work on hydrogen peroxide. 1924-25.
 Recent trends in colloid chemistry. 1936-37.
- Hurst, W. D., B.Sc.(C.E.).
 1940
 The science of modern sewage treatment. 1940-41.
- Isa, J. M., B.S.A., M.Sc., B.V.Sc., V.S.
 1942
- James, E. S., M.D., F.R.C.S.(Eng.).
 1943
- James, N., B.S.A., M.S., Ph.D.
 1934
 The bacteria in root nodules of legumes. 1935-36.
 Errors of the plating method. 1938-39.
- Jefferson, E. W., M.A.
 1912; committee, 1930-32.
 Terrestrial magnetism. 1913-14.
 Note on depth of field of a lens. 1925-26.
- Johnston, K. C., B.Sc., M.D.
 1943
- Kenny, R. W., M.D.
 1934; member, 1905-07.

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- Experiments on the heat contraction of the muscles of different animals.
1905-06.
Pigments in feather. 1933-34.
Laidlaw, G. C., B.Sc., M.C.I.C.
1944
The biological processes of oxidation of sewage pollution. 1944-45.
Lawrence, A. G.
1936
Humming-birds. 1938-39.
Leach, W., M.Sc., Ph.D., D.Sc., F.R.S.C.
1937; committee, 1940-43.
Measurement of respiration. 1937-38.
The carbon dioxide output of moist wheat. 1943-44.
Leith, E. I., M.Sc.
1936
The price of evolution. 1936-37.
Lougheed, M. S., B.A., M.D., C.M., B.Sc., D.P.H.
1924; committee, 1942-45.
Diphtheria toxins and toxoids. 1928-29.
Lowe, C. W., M.Sc.
1917; Rec. 1938-45.
Fresh water algae of the Canadian Arctic Expedition. 1919-20.
Demonstration of phycocyanin and chlorophyll in *Oscillatoria splendida*.
1929-30.
The biology of *Hydrodictyon reticulata* - the water net. 1930-31.
Demonstration: double reflection of an island in water. 1930-31.
Demonstration: zygospore formation of an unknown species of *Cosmarium*.
1931-32.
Manganese deposits in Nova Scotia with diatoms. 1932-33.
Some alga balls from Ontario. 1932-33.
Soil algae. 1935-36.
Flora of Manitoba. 1937-38.
MacDonald, A. E., M.Sc., M.E.I.C.
1932; committee, 1935-37.
Storage of granular material in deep bins. 1932-33.
Remedies for differential settlement of building foundations. 1935-36.
MacDonald, P. A., M.Sc., Ph.D.
1932
The mechanical equivalent of light. 1928-29.
The Weber-Fechner Law. 1928-29.
Some physical concepts underlying nerve reactions. 1930-31.
The physical basis of radiation therapy and demonstration of the
preparation of radium emanations. 1932-33.
The amplification of direct currents by thermionic valves. 1933-34.
Measurement of the absorption of light in the ultra-violet spectrum.
1934-35.
Some spectroscopic properties of blood serum. 1937-38.
McDougall, D., B.Sc.(Phar.), M.Sc., F.C.I.C.
1942
McGreer, C. G., B.A., M.D., L.R.C.P. and S.(E), M.R.C.S.
1913
Relative food values. 1916-17.
McLeod, J. A., M.Sc., Ph.D.
1939
The zoology of swimmer's itch. 1934-35.
Further report on *Cercaria*. 1937-38.
MacLean, N. J., M.D., M.R.C.S., F.A.C.S.
Life member, 1939; member, 1906-39.
Heredity. 1911-12.
Dwarfism and giantism. 1922-23.
Meredith, W. O. S., B.S.A., M.Sc., F.C.I.C.
1942
Mitchell, Ross B., B.A., M.D., C.M., F.A.C.S., F.R.C.S.(C)
- 1920; committee, 1932-33.
Newer method of diagnosis of pregnancy. 1924-25.

- The relief of pain in labour. 1932-33.
Pelvic architecture. 1939-40.
- Montgomery, Hon. E. W., M.A., M.D., C.M., LL.D., F.A.C.P.
Life member, 1940; member, 1913-40; committee, 1915-19.
The fossil beds of La Brea, California. 1914-15.
Sequoia gigantea - The Giant Redwood trees of California. 1922-23.
Fossil forests. 1931-32.
- Moorhouse, V. H. K., M.C., B.A., M.D., F.R.S.C.
1921; committee, 1923-27.
Demonstration of reflex action. 1921-22.
Note on the anatomy and physiology of the eye. 1922-23.
*The path of the retinal reflex in the frog. 1922-23.
Parathyroid tetany and blood and cerebrospinal fluid calcium. (With A. T. Cameron). 1924-25.
Note on test of Collip's parathyroid extract. (With A. T. Cameron). 1924-25.
Demonstration of reflex action in spinal dogs. 1926-27.
The response of fish to noise. 1931-32.
The effect of sympathectomy on muscle power. (With A. Gibson). 1931-32.
The question of hearing in fish. (Demonstration of specimens showing auditory labyrinth). 1933-34.
- Morrow, J. K., D.V.M.
1935; committee, 1943-44.
The dance of the prairie chicken. (Moving picture). 1932-33.
Some animal diseases communicable to man. 1936-37.
Short motion picture film on encephalitis. 1937-38.
- Neatby, K. W., M.S.A., Ph.D.
1940; member, 1932-35.
The chromosome theory of inheritance. 1934-35.
- Nicholson, D., M.D., C.M., M.R.C.P.(Lond.).
1921; committee, 1936-38.
Some notes on protein sensitization. 1922-23.
Demonstration of a new method for examination of white blood cells. 1925-26.
- Olson, P. J., B.S., M.S., Ph.D.
1939
Heterosis in relation to corn improvement. 1940-41.
- Ormerod, M. J., M.B.
1928; Committee, 1932-34; Rec. 1934-38; Sec. 1938-40.
Anaesthetic purity and technique. 1930-31.
Intravenous anaesthesia. 1934-35.
Purgatives. 1935-36.
New antiseptics from the vegetable world. 1941-42.
- Parker, M. A., B.Sc., LL.D., F.R.I.C., F.C.I.C., F.R.S.C.
Life member, 1930; Original Member, 1905-30; committee, 1905-09; Treas. 1909-30.
Stereo-isomerism. 1905-06.
The spectroscope. (Demonstration with F. Allen). 1905-06.
The influence of moisture on chemical actions. 1906-07.
The rusting of iron. 1909-10.
The structure of molecules. 1912-13.
Notes on examination of Winnipeg air. (With C. J. Lee, guest). 1915-16.
The determination of soot fall in Winnipeg in winter. (With A. J. Wright, Jr., guest). 1916-17.
Further determination of humidity of Winnipeg air. (With A. J. Wright, Jr., guest). 1916-17.
Coal and smoke. 1917-18.
Triboluminescence. 1918-19.
Some properties of colloids. 1919-20.
Demonstration of rhythmic precipitation. 1920-21.
Isotopes. 1921-22.
The subsequent careers of Hudson's Bay Research Fellows. 1928-29.
- Patriarche, V. H., A.F.C., B.Sc.(C.E.).
1935
The development of commercial aviation. 1935-36.

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- Peterson, R. F., B.S.A., M.Sc., Ph.D.
1937
Breeding of plants for disease resistance. 1939-40.
- Rennie, J. W. R., M.D., F.R.C.S.(E).
1944
- Rice, H. V., M.D., Ph.D.
1939; committee, 1943-45.
Nervous control of respiration. 1939-40.
Some experiments with electrical phenomena in physiological research.
1942-43.
The electroencephalograph. 1943-44.
- Robinson, A. D., M.A., Ph.D., F.C.I.C.
1935
The colloid chemistry of protein reactions. 1935-36.
- Sadler, W., M.A.
1922; member, 1919-21; committee, 1934-37.
A Seventeenth Century scientific dilettante. 1927-28.
The personalities of some great men of science. 1934-35.
- Saunderson, H. H., B.A., M.Sc., Ph.D., F.C.I.C.
1934; Sec. 1940-45.
Problems in the pulp industry. 1935-36.
Plastics. 1939-40.
Natural and synthetic rubber. 1941-42.
High octane gasoline. 1943-44.
- Savage, A., B.S.A., D.V.M., M.R.C.V.S.
1922; committee, 1926-28, 1933-36.
Some pathological aspects of animal reproduction. 1922-23.
Studies on bovine sperm. 1926-27.
New growth in animals. 1929-30.
Note on the application of the photo-electric cell to the microscope.
1932-33.
Some unorthodox microscopy. 1935-36.
Encephalitis in horses. 1937-38.
- Sigurdson, L. A., M.A., M.D.
1936
The control of haemorrhage. 1939-40.
- Silversides, W. H., B.S.A., M.Sc.
1943
- Smith, N. O., M.Sc., Ph.D., M.C.I.C.
1944
Some aspects of the orchestra and the organ. 1943-44.
- Thompson, I. M., B.Sc., M.B., Ch.B.
1937; committee, 1940-43.
Experiments on human nerves. 1937-38.
The anatomy of science. 1941-42.
- Wallis, J. B., M.A.
1918; committee, 1921-23.
Observation on some Manitoba insects. 1918-19.
Butterflies. 1920-21.
An interesting entomological collecting station in Manitoba. 1926-27.
Observations on a genus of Scarab beetles. 1927-28.
Notes on the distribution of boreal species of Coleoptera. 1931-32.
- Walton, C. H. A., E.D., M.Sc., M.D., F.A.C.P.
1945
Medical science in this war. 1944-45.
- Wardle, R. A., M.Sc., F.R.S.C.
1944; member, 1928-38; committee, 1930-33.
Biotic potential and insect abundance. 1928-29.
Zoological nightmares. 1929-30.
Some problems of Canadian parasitology. 1930-31.
The present status of fishery investigation in Manitoba. 1931-32.
A newly discovered parasitic disease of dogs in Manitoba. 1934-35.
Growth. 1944-45.

- Warren, L. A. H., M.A., Ph.D., F.R.A.S., F.A.I.A. F.A.S., F.C.A.S.
1913
Double stars. 1914-15.
The next solar eclipse. 1917-18.
Recent astronomical photographs and discoveries. 1923-24.
Fundamental principles of life insurance. 1925-26.
The universe around us. 1930-31.
- Watson, H. A., M.Sc., F.C.I.C.
1935; committee, 1941-45.
Sulphonamide. 1937-38.
- Welsh, J. N., B.S.A., M.Sc.
1938
Problems in breeding for disease resistance in oats. 1941-42.
- Wheeler, T. Digby, M.A., M.D., C.M., M.R.C.S., L.R.C.P., F.F.R., F.A.C.R.
1929
Combined histological and biochemical study of pathological thyroid material with special reference to iodine content. 1929-30.
The use of contrast media in radiology. 1932-33.
The planigraph. 1938-39.
- White, F. D., Ph.D., A.R.T.C., F.R.I.C., F.C.I.C.
1925; committee, 1930-32; Treas. 1938-45.
Problems met with in gas warfare. 1925-26.
Marine animals destructive to timber. 1926-27.
The chemistry of the sex hormones. 1934-35.
Defence against war gas. 1936-37.
Vitamin C and infection. 1937-38.
Vitamin K. 1939-40.
Civilian defence. 1942-43.
- Wood, W. J., B.A., M.D., D.P.H.
1941
- Young, F. A., O.B.E., B.A., M.B., M.R.C.S., L.R.C.P., F.A.C.P.
Life member, 1939; member, 1906-39; committee, 1935-38.
Proteid diet in relation to disease. 1906-07.
Does the supra-renal capsule pour its secretion into the circulation through its veins? 1907-08.
Account of some experiments to test the question of an internal secretion of the supra-renal cortex. 1908-09.
The exact measurement of stomach contents. 1910-11.
Demonstration of the aspiration of the contents of the gallbladder. 1920-21.
Eoornis Pterovelox Gobiensis. 1930-31.
- Young, J. F. T., M.A., Ph.D.
1924; committee, 1927-30, 1944-45.
Magnetism and crystal structure. 1924-25.
Modern geophysical methods in prospecting for minerals. 1927-28.
Demonstration: alpha-ray track apparatus. 1927-28.
The origin of light. 1928-29.
Dermatophytes of Manitoba. (With A. M. Davidson and Miss Silver Dowding, guest). 1930-31.
Some applications of physics to naval problems. 1931-32.
Corpuscular physics. 1932-33.
Physics and some naval problems. 1940-41.

VI. GUESTS OF THE CLUB

- 1907-08 Mrs. W. H. Thompson. (Intr. by Swale Vincent).
Preliminary note on the comparative histology of the thyroids and parathyroids.
- 1908-09 Mrs. W. H. Thompson. (Intr. by Swale Vincent).
Relations between thyroid and parathyroids.
- 1910-11 Mr. Neelin. (Intr. by F. Allen).
Sensibility of the retina to changes in intensity of light.
- 1910-11 Mr. W. L. Mann. (Intr. by A. T. Cameron).
The effects of low temperatures upon cold blooded animals.
- 1911-12 Prof. A. H. Taylor, Univ. of N. Dakota. (Intr. by Committee).
Some recent developments in radio-telegraphy.
- 1911-12 Mrs. W. H. Thompson. (Intr. by Swale Vincent).
Exhibition of histological drawings.
- 1912-13 Prof. Abbott, Univ. of N. Dakota. (Intr. by Committee).
The modern theory of solutions.
- 1913-14 Dean Babcock, Univ. of N. Dakota. (Intr. by Committee).
Investigation relative to some undeveloped resources of the North-West.
- 1914-15 Dr. W. A. McIntyre. (Intr. by F. Allen).
Note on a "pothole" and its contents, at the Lake of the Woods.
- 1914-15 Prof. Young, University of N. Dakota. (Intr. by Committee).
The work of the Biological Station at Devil's Lake, N. D.
- 1914-15 Mr. Hanson. (Intr. by R. C. Wallace).
Gold precipitation in the Star Lake district.
- 1915-16 Prof. Rowse. (Intr. by Swale Vincent).
Engineering and the war.
- 1915-16 Prof. A. G. Leonard, Univ. of N. Dakota. (Intr. by Committee).
Lignite deposits of North Dakota.
- 1916-17 Dean H. E. French, Univ. of N. Dakota. (Intr. by Committee).
The production of hydrochloric acid in the stomach.
- 1916-17 Mr. Ganton. (Intr. by Swale Vincent).
Note on the effect of suspension of hutch rabbits.
- 1916-17 Messrs. Ganton and Abbott. (Intr. by Swale Vincent).
The effects of feeding animals with adrenal cortex.
- 1918-19 Prof. P. J. Spence, Univ. of N. Dakota. (Intr. by Committee).
Temperature and its measurement.
- 1921-22 Miss Irene Mounce, Hudson's Bay Co. Research Fellow. (Intr. by A. H. R. Buller)
Distribution of marine plants in Departure Bay.
Homothallism and heterothallism in the Genus coprinus.
- 1921-22 Dr. M. Finkelstein, Hudson's Bay Co. Research Fellow. (Intr. by W. Boyd).
A note on drainage of the gallbladder.
- 1921-22 Miss M. Weinberg. (Intr. by F. Allen).
The function of resonance as a part of the physical theory of audition.
- 1922-23 Dr. C. N. Bell. (Intr. by Committee).
Prehistoric copper instrument, possibly from the Glacial Period.
- 1922-23 Mr. J. R. McHaffie. (Intr. by M. A. Parker).
Demonstration of photomicrographic apparatus.
- 1922-23 Mr. J. Carmichael. (Intr. by A. T. Cameron).
Demonstration of a simple device for loosening stuck stop-cocks.
- 1922-23 Mr. H. Grant. (Intr. by W. Southworth).
Cost of production on Manitoba farms.
- 1923-24 Mr. C. A. Merritt. (Intr. by R. C. Wallace).
Pegmatites and quartz veins.
Gels and primary ore deposits.
- 1923-24 Mr. W. S. Yarwood. (Intr. by R. C. Wallace).
The haematites of Black Island, Lake Winnipeg.

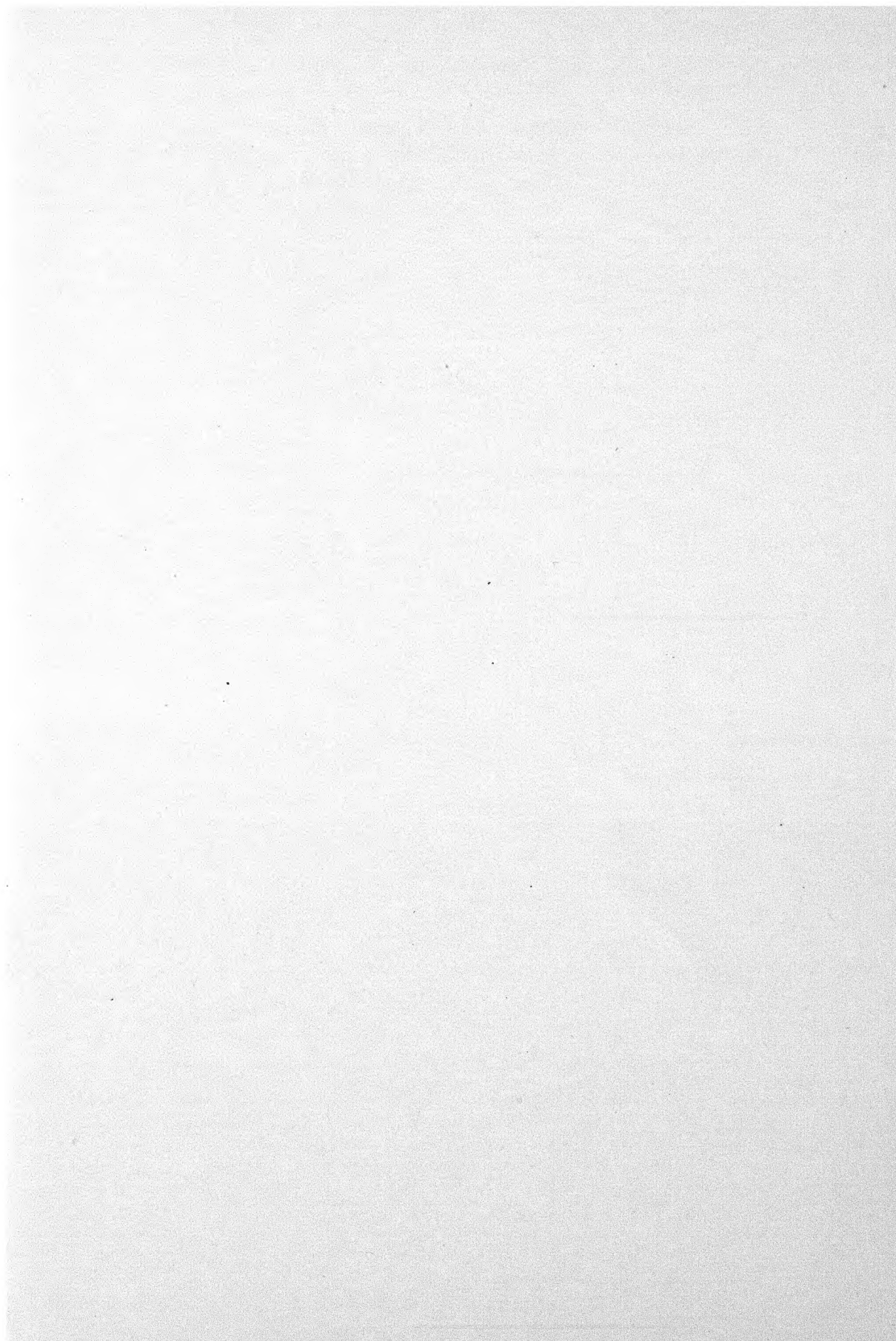
- 1923-24 Mr. M. S. Hollenberg. (Intr. by F. Allen).
Reflex visual sensation.
- 1923-24 Prof. R. Newton, Univ. of Alberta. (Intr. by Committee).
Some water relations of plant cells.
- 1923-24 Miss Dorothy Newton, Hudson's Bay Co. Research Fellow. (Intr. by A. H. R. Buller).
Studies on sex in the hymenomycetes and rust fungi.
- 1924-25 Prof. K. H. Fusseler, Univ. of N. Dakota. (Intr. by Committee).
Radium emanation and radium salt.
- 1924-25 Prof. W. P. Thompson, Univ. of Sask. (Intr. by Committee).
Polyploidy in cereals and its effects on breeding results.
- 1924-25 Mr. A. G. Jacques, Hudson's Bay Co. Research Fellow. (Intr. by M. A. Parker).
The slow hydrolysis of ferric salts.
- 1925-26 Prof. F. E. Lloyd, McGill University. (Intr. by Committee).
The mechanism of sexual reproduction in spirogyra.
- 1925-26 Mr. A. J. Fleming. (Intr. by F. Allen).
Graphical representation of perception of colours.
- 1925-26 Mr. T. C. Vanderpool, Hudson's Bay Co. Research Fellow. (Intr. by A. H. R. Buller).
Violent spore discharge in the stinking smut fungus.
- 1926-27 Mr. F. B. Hutt. (Intr. by A. T. Cameron).
Effect of thyroid feeding on fowls.
- 1926-27 Mr. A. T. Elders, Hudson's Bay Co. Research Fellow. (Intr. by V. W. Jackson).
The cytology of two rust-resistant varieties of common wheat.
- 1927-28 Prof. G. H. Herriot. (Intr. by N. M. Hall).
Experience with a specially insulated house.
- 1927-28 Dean E. A. Howes, Univ. of Alberta. (Intr. by Committee).
The Manorial system and English agriculture.
- 1927-28 Dr. Helen Chataway, Hudson's Bay Co. Research Fellow. (Intr. by M. A. Parker).
Oxidation of linseed oil.
- 1927-28 Mr. D. C. Archibald. (Intr. by F. Allen).
The oscillatory nervous effect.
- 1927-28 Mr. R. A. Lind. (Intr. by F. Allen).
Normal and abnormal vision.
- 1928-29 Prof. R. W. Moffatt. (Intr. by J. N. Finlayson).
The effect of low temperature on the brittleness of metals.
- 1928-29 Dr. H. M. Ami. (Intr. by A. H. R. Buller).
The work of the Canadian school of Pre-History in France.
- 1929-30 Prof. A. G. Huntsman, Univ. of Toronto. (Intr. by Committee).
The scientific refrigeration of fish for commercial purposes.
- 1929-30 Miss Silver Dowding. (Intr. by A. H. R. Buller).
The sex of the normal giant and dwarf spores of *Pleurage Anserina*.
- 1930-31 Prof. S. Basterfield, Univ. of Sask. (Intr. by Committee).
Life and mechanism.
- 1931-32 Mr. C. K. Gunn. (Intr. by R. A. Wardle).
The histology of primeness in fur pelts.
- 1932-33 Mr. C. F. Code. (Intr. by V. H. K. Moorhouse).
Studies on the carotid sinus.
- 1932-33 Mr. T. C. Main. (Intr. by J. N. Finlayson).
Drought and soil drifting of Western Canada.
- 1933-34 Mr. T. C. McNabb. (Intr. by R. T. Hodgson).
Flying to Great Bear Lake.
- 1933-34 Mr. Angus Shortt. (Intr. by H. F. Roberts).
The life history of the Clay-Coloured Sparrow.
- 1936-37 Mr. Z. L. Leigh. (Intr. by V. H. Patriarch).
Scheduled air transportation.
- 1937-38 Capt. A. Innes-Taylor. (Intr. by J. K. Morrow).
Various phases of Antarctic exploration.

THE SCIENTIFIC CLUB OF WINNIPEG

- 1938-39 Prof. C. D. Ellis, F.R.S., Univ. of London. (Intr. by J. F. T. Young).
The nucleus of the atom.
- 1938-39 Mr. H. A. Richmond, Dom. Entomological Lab. (Intr. by H. I. Stevenson).
Forest insects.
- 1939-40 Mr. G. Spence. (Intr. by J. H. Ellis).
The work of the P. F. R. A.
- 1939-40 Mr. C. G. Axworthy. (Intr. by A. E. MacDonald).
Photo-elasticity: A method of stress analysis using polarised light.
- 1940-41 Major Ross. (Intr. by H. B. Chown).
Artillery procedure.
- 1940-41 Dr. I. D. Blair. (Intr. by J. H. Craigie).
Research problems in New Zealand, with special reference to grassland research.
- 1942-43 Dr. J. M. Lederman. (Intr. by D. Nicholson).
Modern blood transfusion.
- 1943-44 Dr. H. H. Watson, Suffield Exp. Station. (Intr. by Committee).
The warmth factor in comfort.
- 1943-44 Dr. A. N. Campbell, former member. (Intr. by H. H. Saunderson).
The history of explosives.
- 1944-45 Dr. C. F. Code, Univ. of Minnesota. (Intr. by Committee).
Studies on "blackout" in pilots.
- 1944-45 Dr. B. N. Smallman. (Intr. by J. A. Anderson).
Recent advances in applied entomology.

VII. WINNERS OF THE CLUB PRIZE

- 1922 J. R. McHaffie, Ph.D., D.Sc. (Lond.). Imperial Chemical Industries Ltd.; returned to Canada as Chief Chemist, and subsequently Director of Research and Development, Canadian Industries Ltd.
- 1922 Miss Irene Mounce, Ph.D. (Tor.). Mycologist and Plant Pathologist, Central Experimental Farm, Ottawa.
- 1925 Miss Mollie Weinberg. Married.
- 1928 L. B. Clark, Ph.D. (John Hopkins). Chairman of the Department of Zoology, Union University, Schenectady, N. Y.
- 1928 Sir Charles F. Goodeve, O.B.E., Ph.D., D.Sc. (Lond.), F.R.S. Department of Physical Chemistry, University College, London. Rendered distinguished war service at the Admiralty as the first Deputy Controller for Research and Development; promoted to Commander, R.N.V.R., and awarded the O.B.E. (Military Division); recently appointed Director of the British Iron and Steel Research Association; knighted in 1946.
- 1931 P. A. Macdonald, Ph.D. (Man.). Studied at McGill University and the California Institute of Technology, and then returned to Winnipeg, where he is now Director of the Cancer Research Institute, and a member of this Club.
- 1933 H. D. Carter, M.Sc. (Man.). Entered the field of popular scientific journalism.
- 1933 C. K. Gunn, Ph.D. (Tor.). Connaught Laboratories, University of Toronto; now Director of Experimental Fox Farms, Prince Edward Island.
- 1935 J. A. McLeod, Ph.D. (Man.). Studied at the University of Minnesota and then returned to Winnipeg where he is now on the staff of the Department of Zoology, University of Manitoba, and is a member of this Club.
- 1945 Miss Mary L. Boyd. Studying at McGill University.



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